

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A device for recording hand-written information in the form of characters, symbols, graphs, drawings, calligraphy and similar hand-written information defined by a hand movement, comprising:

recording means which are adapted to be moved by a hand which carries out the hand movement and to record a plurality of images with partially overlapping contents while the recording means are being moved; and

image-processing means which are adapted to determine the relative positions of the images with the aid of the partially overlapping contents for providing a description in digital format of how the recording means have been moved and to store the hand-written information by storing the description of how the recording means have been moved.

2. (Cancelled).

3. (Previously presented) A device according to claim 1, wherein said description comprises a plurality of movement vectors each indicating how the recording means have been moved between the recording of two images.

4. (Previously presented) A device according to claim 1, wherein said description comprises turning indications, each indicating how the recording means have been turned between the recording of two images.

5. (Previously presented) A device according to claim 1, wherein said device is adapted to determine, on the basis of the overlapping contents of the images, the speed at which the recording means have been moved between the recording of two images.

6. (Original) A device according to claim 5, wherein said device is adapted to compare the speed with pre-recorded speed data for checking the authenticity of the inputted information.

7. (Previously presented) A device according to claim 1, wherein the hand-written information comprises characters and wherein the image-processing means are further adapted to identify the characters with the aid of the description in digital format and to store the identified characters in character-coded format.

8. (Previously presented) A device according to claim 1, wherein said device has a light-sensitive sensor means with a two-dimensional sensor surface for recording the images.

9. (Previously presented) A device according to claim 8, wherein said image-processing means are adapted to determine the relative position of the images both horizontally and vertically.

10. (Previously presented) A device according to claim 1, wherein the recording means are adapted to be directed, while being moved, at a surface which is imaged with the aid of said plurality of images.

11. (Previously presented) A device according to claim 1, further comprising tracing means for indicating on the surface the movement of the recording means.

12. (Previously presented) A device according to claim 11, wherein the tracing means comprise an illumination means which projects light onto the surface.

13. (Previously presented) A device according to claim 1, wherein the recording means and the image-processing means are arranged in a common casing which is adapted to be moved by the hand carrying out the hand movement.

14. (Previously presented) A device according to claim 1, wherein the recording means are arranged in a first casing and the image-processing means in a second casing.

15. (Previously presented) A device according to claim 1, wherein the image-processing means comprise a processor.

16. (Previously presented) A device according to claim 1, wherein said device is adjustable to an operational mode in which it is adapted to record predefined information, preferably text, located on an information carrier, by imaging the information with the aid of a plurality of images with partially overlapping contents.

17. (Previously presented) A device according to claim 1, wherein said device is adjustable to an operational mode in which it is adapted to image an object located at a distance from the device.

18. (Previously presented) A device according to claim 1, further comprising a transceiver for wireless communication with an external unit.

19. (Currently amended) A method of recording hand-written information in the form of characters, symbols, graphs, drawings, calligraphy and similar hand-written information defined by a hand movement, comprising:

moving a device with a hand which is carrying out the hand movement;

recording with the device a plurality of images with overlapping contents while moving the device; and

determining the relative positions of the images with the aid of the partially overlapping contents for providing a description in digital format of how the device has been moved, and,

storing the hand-written information by storing the description of how the device has been moved.

20. (Previously presented) A method according to claim 19, wherein the information defined by a hand movement comprises characters and further comprising identifying the characters with the aid of the description and storing them in character-coded digital format.

21. (Previously presented) A method of determining a position of a hand-held device which is adapted to record a plurality of images while it is being moved, comprising:

recording the images with partially overlapping contents,

determining the relative positions of the images,
and using the relative positions for determining the position
of the device.

22. (Previously presented) A device according to claim 1,
further comprising display means for reproducing the hand-written
information based on the description of how the recording means
have been moved.

23. (Previously presented) A method according to claim 19,
further comprising displaying the handwritten information based on
the description of how the device has been moved.

24. (Previously presented) A method according to claim 19,
further comprising determining, on the basis of the overlapping
contents of the images, the speed at which the device has been
moved between the recording of two images.

25. (Previously presented) A method according to claim 24,
further comprising comparing the speed with pre-recorded speed data
for checking the authenticity of the handwritten information.

26. (Previously presented) A method according to claim 19, further comprising indicating on the surface the movement of the device.

27. (Previously presented) A method according to claim 19, further comprising recording pre-existing information on an information carrier by imaging the information with the aid of a plurality of images with partially overlapping contents.

28. (Previously presented) A method according to claim 27, further comprising adjusting the device from a first operational mode for recording the handwritten information to a second operational mode for recording the pre-existing information.

29. (Previously presented) The method of claim 19, further comprising:

determining, based on the description of how the device has been moved, the handwritten character.

30. (Previously presented) A device for recording handwritten information comprising:

a recorder adapted to be moved by a hand which carries out the hand movement and to record a plurality of images with partially overlapping contents while the recorder is being moved; and

an image-processor adapted to determine the relative positions of the images with the aid of the partially overlapping contents for providing a description in digital format of how the recorder has been moved and to store the hand-written information by storing the description of how the recorder has been moved.

31. (Previously presented) A device according to claim 30, wherein said description comprises a plurality of movement vectors each indicating how the recorder has been moved between the recording of two images.

32. (Previously presented) A device according to claim 30, wherein said description comprises turning indications, each indicating how the recorder has been turned between the recording of two images.

33. (Previously presented) A device according to claim 30, wherein said device is adapted to determine, on the basis of the overlapping contents of the images, the speed at which the recorder has been moved between the recording of two images.

34. (Previously presented) A device according to claim 33, wherein said device is adapted to compare the speed with pre-

recorded speed data for checking the authenticity of the inputted information.

35. (Previously presented) A device according to claim 30, wherein the hand-written information comprises characters and wherein the image-processor is further adapted to identify the characters with the aid of the description in digital format and to store the identified characters in character-coded format.

36. (Previously presented) A device according to claim 30, wherein said device has a light-sensitive sensor with a two-dimensional sensor surface for recording the images.

37. (Previously presented) A device according to claim 36, wherein said image-processor is adapted to determine the relative position of the images both horizontally and vertically.

38. (Previously presented) A device according to claim 30, wherein the recorder is adapted to be directed, while being moved, at a surface which is imaged with the aid of said plurality of images.

39. (Previously presented) A device according to claim 30, further comprising a tracer for indicating on the surface the movement of the recorder.

40. (Previously presented) A device according to claim 39, wherein the tracer comprises an illuminator which projects light onto the surface.

41. (Previously presented) A device according to claim 30, wherein the recorder and the image-processor are arranged in a common casing which is adapted to be moved by the hand carrying out the hand movement.

42. (Previously presented) A device according to claim 30, wherein the recorder is arranged in a first casing and the image-processor in a second casing.

43. (Previously presented) A device according to claim 30, wherein the image-processor comprises a processor.

44. (Previously presented) A device according to claim 30, wherein said device is adjustable to an operational mode in which it is adapted to record predefined information located on an

information carrier, by imaging the information with the aid of a plurality of images with partially overlapping contents.

45. (Previously presented) A device according to claim 30, wherein said device is adjustable to an operational mode in which it is adapted to image an object located at a distance from the device.

46. (Previously presented) A device according to claim 30, further comprising a transceiver for wireless communication with an external unit.

47. (Previously presented) A device according to claim 30, further comprising a display for reproducing the hand-written information based on the description of how the recorder has been moved.

48. (New) A method of recording handwritten information defined by a hand movement comprising the steps of:
providing a surface having a pattern;
providing an imaging device;
moving the imaging device with a hand which is carrying out the hand movement relative to the surface while recording with the imaging device a plurality of images of the surface pattern with

partially overlapping contents;

determining the relative positions of the images with the aid of the partially overlapping contents; and

providing a description in digital format of how the imaging device has been moved based on the relative positions of the surface pattern in the partially overlapping images.

49. (New) The method of claim 48 including the additional step of storing the hand-written information by storing the description of how the device has been moved.

50. (New) The method of claim 48 wherein said step of determining the relative positions of the images is performed in parallel with said step of providing a description in digital format.

51. (New) The method of claim 48 including the additional step of displaying the handwritten information based on the description.

52. (New) A method of recording handwritten information defined by a hand movement comprising the steps of:
providing a surface having a preexisting pattern;
providing an imaging device;

moving the imaging device with a hand which is carrying out the hand movement relative to the surface while recording with the imaging device a plurality of images of the preexisting pattern with partially overlapping contents;

determining the relative positions of the images with the aid of the partially overlapping contents; and

providing a description in digital format of how the imaging device has been moved based at least in part on the relative positions of the preexisting pattern in the partially overlapping images.

53. (New) The method of claim 52 including the additional step of storing the hand-written information by storing the description of how the device has been moved.

54. (New) The method of claim 52 wherein said step of determining the relative positions of the images is performed in parallel with said step of providing a description in digital format.

55. (New) The method of claim 52 including the additional step of displaying the handwritten information based on the description.

56. (New) A method of recording handwritten information defined by a hand movement comprising the steps of:

providing a surface having a pattern;

providing an imaging device;

moving the imaging device with a hand which is carrying out the hand movement relative to the surface while recording with the imaging device a plurality of images of the surface pattern with partially overlapping contents; and

providing a description in digital format of how the imaging device has been moved by determining the relative positions of the images with the aid of the partially overlapping contents.

57. (New) The method of claim 56 including the additional step of storing the hand-written information by storing the description of how the device has been moved.

58. (New) The method of claim 56 including the additional step of displaying the handwritten information based on the description.

59. (New) A device for recording handwritten information defined by a hand movement comprising:

an imaging device adapted to be moved by a hand which carries out the hand movement and to record a plurality of images with partially overlapping contents of a surface having a pattern while

the imaging device is being moved; and

an image processor adapted to determine the relative positions of the surface pattern in the images with the aid of the partially overlapping contents and to provide a description in digital format of how the imaging device has been moved based on the relative positions of the surface pattern in the partially overlapping images.

60. (New) A device for recording handwritten information defined by a hand movement comprising:

an imaging device adapted to be moved by a hand which carries out the hand movement and to record a plurality of images with partially overlapping contents of a surface having a preexisting pattern while the imaging device is being moved; and

an image processor adapted to determine the relative positions of the preexisting pattern in the images with the aid of the partially overlapping contents and to provide a description in digital format of how the imaging device has been moved based at least partially on the relative positions of the preexisting pattern in the partially overlapping images.